

A conformity determination based on air emission analysis is required for each proposed Federal action within a non-attainment area. Since this geographical region is in attainment and meets the National Air Quality Standards for the criteria pollutants designated in the CAA, a conformity determination is not required.

#### **4.8 Hazardous, Toxic, and Radiological Waste**

Potential for discovery of hazardous material during construction of the Arkansas River Highway 83 Bridge, Streambank Protection Project, in Garden City, Kansas was evaluated through examination of historic and current land use, review of environmental databases, interviews with local regulatory personnel, and visual observations. Avoidance of HTRW during construction is desirable in order to minimize project delays, remediation costs, and environmental damage.

Lands in the project area are primarily composed of agricultural land. As such, these lands have not been subject to industrial development or other land use activities with associated potential for significant contamination. In addition, lands in close proximity to the project area share similar land uses and has a low potential for contaminant transport to the project. Accordingly, there is no reason to believe that environmental media in the project area have been significantly contaminated by past or current land practices or by releases from adjoining properties. No hazardous, toxic, or radiological waste was observed, and potential for encountering these materials does not appear likely.

A search of environmental databases revealed no documented areas of contamination near the project location. A search of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database revealed the presence of two CERCLIS-listed sites in Finney County, Kansas. However, both are located over three miles from the proposed project. Similarly, 11 sites listed on the Enforcement and Compliance History Online (ECHO) database were noted in Finney County. Of these sites, none are located in Garden City, Kansas and all are removed from the construction area. Equipment used in the sand operations on the river were noted in the area but not believed to be hazardous or toxic. Based on this information from environmental databases and documents there is a low probability of HTRW related problems from documented areas of local contamination.

In addition to searches of environmental databases, local personnel from the Garden City area and Finney County, Kansas area were contacted, in conjunction with the ongoing Ark River 1135 Project, for information related to potential areas of contamination that could affect project construction or operation. The US Highway 83 Bridge project is within the project area of the Ark River 1135 Project. These personnel included personnel from the Garden City Zoological Center and residents in Garden City, Kansas. All contacted individuals were unaware of any HTRW related issues near the site.

Finally, a site visit was conducted on May 28, 2003, in conjunction with the ongoing Ark River 1135 Project, and included a search for visual evidence of potential HTRW-related problems. This involved walking the project area as well as visual reconnaissance of surrounding areas. Areas of soil staining, evidence of unusual vegetative distress, drums of containerized waste, unusual topography (mounds or depressions), or other visual evidence of potential contamination were not noted at any location within the proposed Highway 83 Bridge project.

### **SECTION 5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION**

A summary of environmental impacts is presented in Table 5.0, Impact Assessment Matrix.

#### **5.1 Social and Economic Impacts**

##### **5.1.1 Future Without-Project Conditions**

Under the without-project conditions, population trends of the past decade would likely continue. Job opportunities in Garden City and the demand for residential lands will be linked to future population dynamics in the area. US Highway 83 is a major north-south traffic route in western Kansas and carries a significant amount of large truck traffic. The Highway 83 Bypass routes most of this traffic around the City. In the absence of the bridge

**Table 5.0**  
**Impact Assessment Matrix**

Name of Parameter	Magnitude of Probable Impact						
	Increasing Beneficial Impact			No Appreciable Effect	Increasing Adverse Impact		
	Significant	Substantial	Minor		Minor	Substantial	Significant
<b>A. Social Effects</b>							
1. Noise Levels				x			
2. Aesthetic Values				x			
3. Recreational Opportunities				x			
4. Transportation	x						
5. Public Health and Safety		x					
6. Community Cohesion (Sense of Unity)		x					
7. Community Growth and Development			x				
8. Business and Home Relocations				x			
9. Existing/Potential Land Use			x				
10. Controversy				x			
<b>B. Economic Effects</b>							
1. Property Values			x				
2. Tax Revenues		x					
3. Public Facilities and Services		x					
4. Regional Growth				x			
5. Employment				x			
6. Business Activity		x					
7. Farmland/Food Supply		x					
8. Flooding Effects				x			
<b>C. Natural Resource Effects</b>							
1. Air Quality				x			
2. Terrestrial Habitat				x			
3. Wetlands				x			
4. Aquatic Habitat				x			
5. Habitat Diversity and Interspersion				x			
6. Biological Productivity				x			
7. Surface Water Quality				x			
8. Water Supply				x			
9. Groundwater				x			
10. Soils				x			
11. Threatened and Endangered Species				x			
<b>D. Cultural Resources Effects</b>							
1. Historic Architectural Values				x			
2. Pre-Historic & Historic Archeological Values				x			

protection project the bridge would eventually fail and Garden City would experience a significant increase in truck traffic through the downtown area. The downtown streets are not designed to withstand this heavy traffic, which would result in redirected funding from maintenance of residential, commercial and industrial properties, with a potential reduction of population growth in the area. Heavy traffic through the downtown area would disrupt the lives of those conducting business, going to school and residing in the City. The health and safety of these individuals would be at greater risk with the increase in traffic.

The unemployment rate would remain higher than the state level. Manufacturing and education, health, and social services would remain an important part of the industrial segment of the economy, and management and retail trade would be expected to increase in their importance as part of the Finney County economy. Erosion would continue to pose a threat to the US Highway 83 Bypass Bridge. Loss of the bridge would disrupt traffic along Highway 83 Bypass, which is a heavily used road for the residents of Garden City. If this road becomes disrupted then the road will be closed and traffic will be diverted through downtown along the old highway system, which can make for less efficient travel.

Income of persons living in the area is expected to remain lower than the State and national averages. Erosion would continue to impose a safety hazard on those living and working in the area because of the potential for bridge failure and consequential increased traffic congestion through the downtown area. The additional costs associated with upgrade, repair, and maintenance of old Highway 83 through downtown would result in higher taxes and reduced disposable income. As employment opportunities remain higher in Garden City than peripheral areas, the income of residents of Garden City will likely be tied to employment in the manufacturing and educational, health, and social services. Property values would stabilize at lower levels without an efficient flow of traffic through and around Garden City.

Land use for the Garden City area will continue to be a mixture of low, moderate and high-income residential properties, commercial development, and light industrial lands. The median house value in the Garden City area in 2000 was \$81,700. Demand for new residential developments will increase the transition of agricultural lands into residential areas although at a pace that will be slower than in the metropolitan areas. Routing of traffic through the downtown area because of a failure of the US Highway 83 Bridge with its resultant traffic congestion and safety issues would result in an increase in the stress level of local citizens.

### **5.1.2 Future With-Project Conditions**

The emergency streambank protection project will have a positive impact on the number of people living in the study area. Population trends of the past decade will continue. Safe and efficient travel to and from Garden City would continue to stimulate population growth in the area.

Project construction may slightly increase job opportunities in the area until construction is complete. Long-term area employment will increase slightly in response to additional residential construction, commercial employment, and the increased retail trade in the Garden City area. The overall aggregate employment rate of the Garden City area would not be significantly affected.

Short-term construction related employment would increase area incomes, as expenditures for materials and labor will be made during the flood control project construction. Long-term increases in income within the Garden City area will be realized as construction of residential and commercial property takes place in response to reduced flood hazards within the area.

Although land use for the Garden City area would continue to be a mixture of residential, commercial, industrial, and agricultural, increased quality urban growth would continue with protection of the bridge. Demand for new residential developments would increase the transition of developable lands into residential areas at a pace that would be slightly ahead of surrounding areas. The safety of Garden City area residents would be maintained by guarding against the loss of the bridge.

## **5.2 Natural Resource Impacts**

### **5.2.1 Terrestrial**

The proposed project would not result in the loss of any significant habitat or cause any significant adverse effects on the natural environment. No trees or shrubs would be removed by the project. Restoration will return the area to comparable-to or better-than existing habitat as discussed in Section 6.0.

### **5.2.2 Prime Farmland**

There would be no impact on prime farmland since these soils do not occur in the project area.

### **5.2.3 Aquatic and Wetlands**

There would be no impact on aquatic habitat or wetlands.

### **5.2.4 Wildlife**

Construction activities would have minor, short-term impacts on the wildlife species at the immediate construction site. This disturbance would be temporary during construction. Rock structure along the riprap sections of the completed project would provide additional habitat for some species that utilized rock crevices.

## **5.3 Wetlands and Water Quality Permits**

This emergency protection project involves the placing of riprap and a rock filled trench to protect the south abutment of the US Highway 83 Bypass Bridge. This project falls under a Nationwide Permit for Bank Stabilization (NWP 13), authorized pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Appendix B).

## **5.4 Threatened and Endangered Species**

The U.S. Fish and Wildlife Service reports that the Arkansas River in Finney County, Kansas is designated critical habitat for the Federally listed Arkansas River Shiner. Based on a field review of the proposed project area it appears that the emergency protection of the US Highway 83 Bypass Bridge would have no adverse impact on the species. The project area is normally dry riverbed, does not contain a riparian (wetland) component, and does not contain the Primary Constituent Elements (Federal Register, Vol. 66, No. 65) that are essential to conservation of the species. Conversely, if the species existed in the project area the project could have a positive impact on the species because of improved water quality through reduced erosion of the bridge abutment. No other Federally listed threatened or endangered species would be affected by the proposed project.

The state threatened Texas longnose snake inhabits rocky canyons and open prairies with sandy soils in southwestern Kansas. This species could occur in the project area. They burrow readily in loose soil but will enter crevices if available rather than burrow. They will utilize riparian habitat but not aquatic habitat. This species should benefit from the presence of riprap in the area because of the creation of rock crevices, which is a favored habitat for the species.

The Kansas Department of Wildlife and Parks has designated all suitable habitats along the Arkansas River within Finney County as critical habitat for the state threatened eastern spotted skunk. In western counties, it relies heavily on riparian corridors where woody shrubs and woodland edges are present. Project impacts would not adversely affect woody shrubs and woodland edges utilized by the spotted skunk. Essentially the only habitat at the construction site that might be considered spotted skunk habitat would consist of a narrow strip of native vegetation (salt cedar and tumbleweed), beneath the banks of the river that would serve as a travel corridor beneath the bridge; although they could hunt for food anywhere in the prairies. Disruption would be temporary during construction. Restoration of the site (Section 6.0) should return the area to comparable-to or better-than existing spotted skunk habitat.

## **5.5 Cultural Resources**

As outlined in section 4.6, Section 106 coordination (National Historic Preservation Act of 1966, as amended) is complete. The proposed project will have no effect on historic properties.

## **5.6 Water Quality**

The section of the project site where riprap would be applied is normally a dry riverbed. Water quality should not be affected during construction of the project and should be improved during periods of flow/high flows by reducing erosion and siltation. The proposed project should not have an impact on the quality of groundwater.

## **5.7 Air Quality**

Construction activity would have a minor temporary impact on air quality caused by heavy equipment operation and from fugitive dust (particulate) emissions in and around the project site. Construction contractors will comply with all appropriate Federal air quality regulations to limit the dispersal of particulate matter. A temporary increase in exhaust emissions would be expected during construction.

## **5.8 Noise**

There would be an increase in noise from heavy equipment during construction, but this would be temporary and last only during the construction period.

## **5.9 Hazardous, Toxic, and Radiological Waste**

Based on the findings of the HTRW survey discussed in Section 4.8, the potential for discovery and significant problems related to HTRW during project construction or operation is believed to be low.

## **5.10 Cumulative Impacts**

No cumulative impacts are anticipated to occur as a result of the proposed project.

## **SECTION 6.0 RESTORATION PLAN**

Implementation of the proposed plan would require removal of all vegetation along the two trenches and center riprap section. Construction equipment would cause additional soil disturbance. The two trenches would be excavated per design, filled with rock, and covered with filter cloth and approximately one foot of topsoil. The center section would be sloped, backfilled with compacted fill, covered with filter cloth, and riprapped with 24" riprap. The riprap would remain exposed. Construction activities would temporarily impact an approximate 100-foot wide strip of terrestrial habitat consisting of grasses and forbs along the length of the structure. No trees or shrubs would be removed by the project.

Following project completion, all compacted, disturbed, or exposed soil will be disked, fertilized, and seeded with the grass/forb mixture shown in Figure 6.0. This is a mixture of plants that are native to the area and prescribed by the Environmental Services Section of the Kansas Department of Transportation for environmental conditions in Finney County, Kansas. Two mixes are prescribed in Figure 6.0. A shoulder mix, consisting of four species of grass will be seeded on the road shoulder where a high degree of maintenance and mowing is required. The native mix will contain seven species of grasses, including the four species of the shoulder mix, and 15 species of forbs. The mixture will consist of a 60:40 ratio of grass to forbs. Mulch will be applied as necessary. Application rates for soil amendments and the seed mixture are shown in Figure 6.0.

PLS Rate: lbs./ac.		Bid Item	Shoulder Mix	Native Mix
Shldr	Native			
100		Fertilizer ( 15 - 30 - 15 )		
2	1	Blue Grama Grass Seed ( Lovington )	812,000 X 2.5 = 1,624,000	812,000 X 1 = 812,000
4	3	Canada Wildrye Grass Seed	113,000 X 5 = 565,000	113,000 X 3 = 339,000
	5	Sand Bluestem Grass Seed ( Garden )		111,000 X 4 = 444,000
	0.5	Sand Lovegrass Seed ( Bend )		1,403,000 X 0.5 = 701,500
6	4	Side Oats Grama Grass Seed ( El Reno )	185,000 X 5 = 925,000	185,000 X 4 = 240,000
	1	Switchgrass Seed ( Blackwell )		371,000 X 1 = 371,000
4	4	Western Wheatgrass Seed ( Barton )	113,000 X 5 = 565,000	113,000 X 4 = 452,000
			<b>Total Grass Seeds: 3,859,500</b>	
		<b>Native Wildflower Mix (Lump Sum)</b>		
	0.4	Upright Coneflower		737,000 X .4 = 294,800
	0.2	Illinois Bundlesflower		60,000 X .2 = 12,000
	0.3	Maximilian Sunflower		182,000 X .3 = 54,600
	0.5	Purple Prairieclover		293,000 X .5 = 146,500
	1	Showy Partridgepea		50,000 X 1 = 50,000
	0.5	Prairie Sunflower		150,000 X .5 = 75,000
	1	Indian Blanket		153,000 X 1 = 153,000
	1	Black Sampson ( Angustifolia )		115,000 X 1 = 115,000
	1.5	Purple Poppy Mallow		82,000 X 1.5 = 123,000
	0.2	Compass Plant		92,000 X .2 = 18,400
	0.5	Pitchers Sage		149,000 X .5 = 74,500
	0.4	Dotted Gayfeather		221,000 X .4 = 88,640
	0.2	Silk Top Dalia		280,000 X .2 = 56,000
	0.1	Yarrow (White)		2,800,000 X .1 = 280,000
			<b>Total Wildflower Seeds: 1,541,440</b>	

Package and sow the Grass Seed Mix separately from the Wildflower Mix. Place the wildflower seed in the small seed box of the native grass drill.  
All seed boxes shall have working agitators. The Engineer shall approve the seed calibrations prior to seeding.

**Figure 6.0 Seed Mixture for Restoration.**

## SECTION 7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

The draft environmental assessment (EA) was coordinated with the following agencies having legislative and administrative responsibilities for environmental protection. A copy of the correspondence from the agencies that provided comments and planning assistance for preparation of the draft EA are in the appendices. The mailing list for the 30-day public review period for this EA is in Appendix A.

U.S. Environmental Protection Agency  
U.S. Fish and Wildlife Service  
Natural Resources Conservation Service  
Kansas Department of Health and Environment  
Kansas Water Office  
Kansas Department of Wildlife and Parks  
Kansas State Historical Society

## SECTION 8.0 REFERENCES

Bailey, R.G. 1980. *Ecoregions of the United States*. Miscellaneous Publication No. 1391. USDA, Forest Service, Washington, DC.

Soil Conservation Service. 1981. *Prime Farmland, Soil Survey Map Units, Kansas*. U.S. Department of Agriculture (USDA), Salina, Kansas. 34p.

Soil Conservation Service. 1965. *Soil Survey of Finney County, Kansas*. USDA, Manhattan, Kansas. 91p.

U.S. Bureau of Census. 2001. *2000 Census of Population and Housing, STF3*. [www.census.gov/](http://www.census.gov/)

Kansas Department of Agriculture. Division of Water Resources. Website. [www.accesskansas.org/kda/dwr/](http://www.accesskansas.org/kda/dwr/)

Greatplains.org, 2000. Great Plains International Data Network (GPIDN). *Atlas of the Great Plains*. Website. [www.greatplains.org/resource/atlas](http://www.greatplains.org/resource/atlas)

Kansas Geological Survey. Website. [www.kgs.ukans.edu/kgs.html](http://www.kgs.ukans.edu/kgs.html)

Kansas Department of Wildlife and Parks. Website. [www.kdwp.state.ks.us/](http://www.kdwp.state.ks.us/)

Kansas Water Office. Website. [www.kwo.org](http://www.kwo.org)

Federal Register. 2001. Department of the Interior. Fish and Wildlife Service. 50 CFR 17. *Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner; Final Rule*.